

FIG. 1

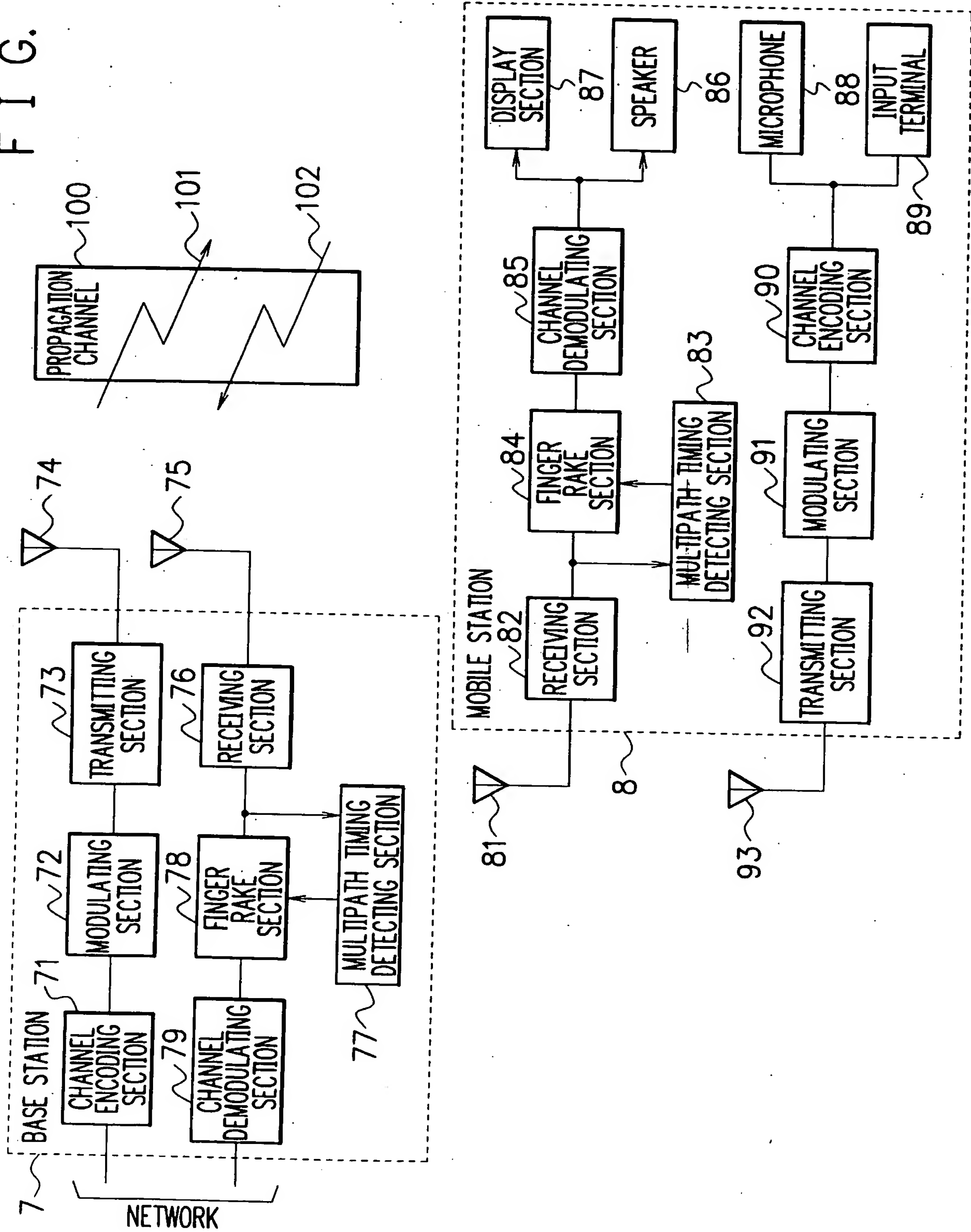
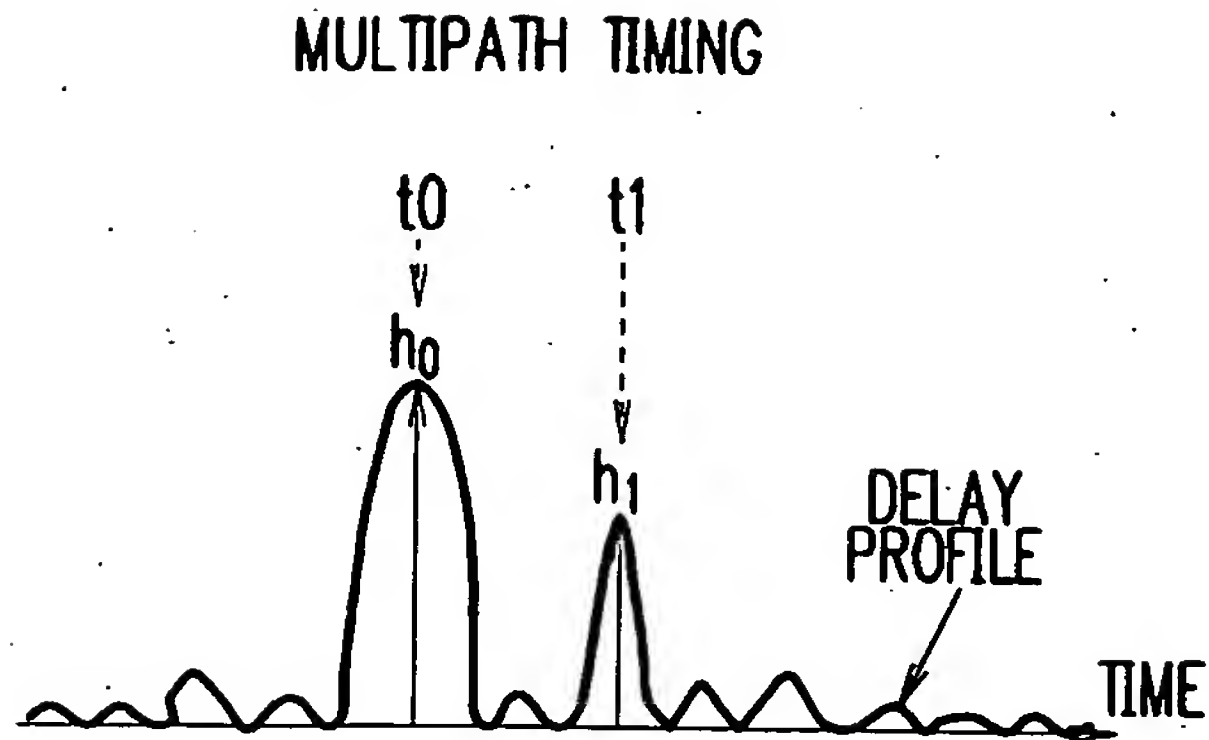
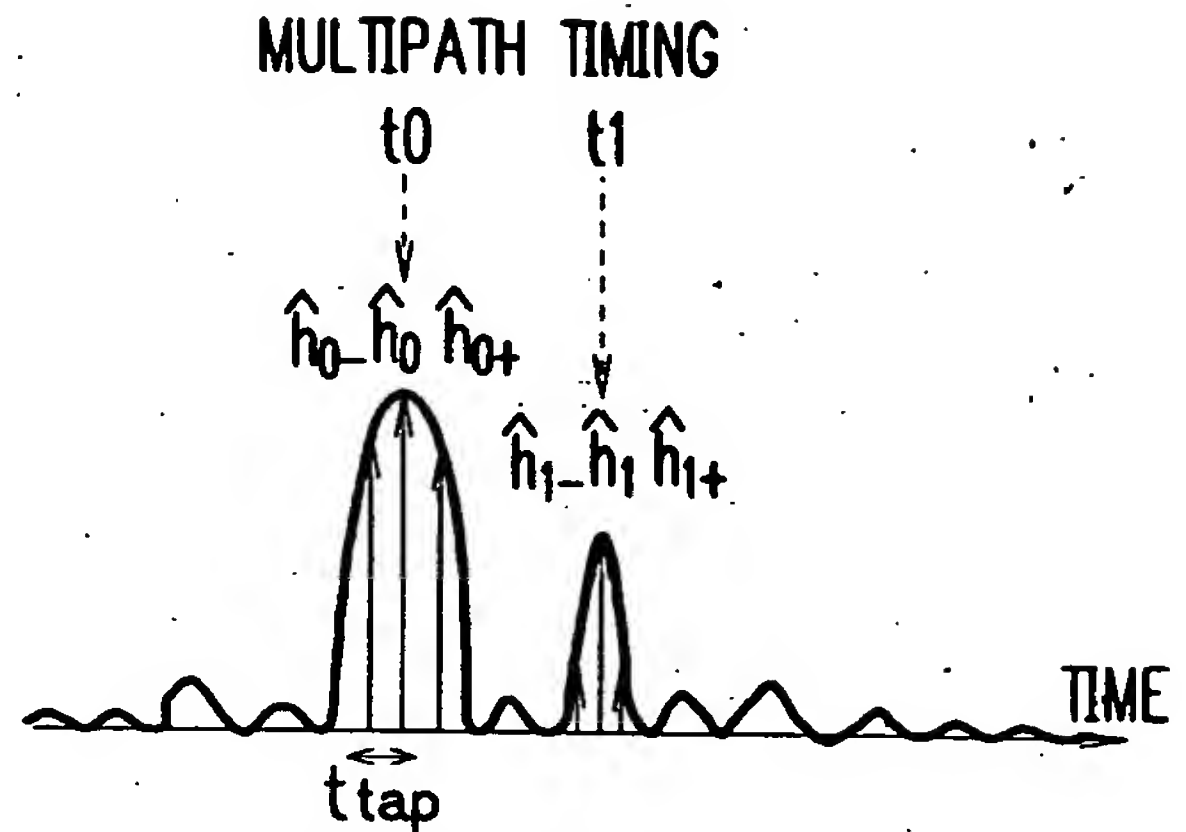


FIG. 5



a) DELAY PROFILE (Nca=1)



b) DELAY PROFILE (Nca=3)

$$H = H_{Nca=1} = \begin{bmatrix} h_0 & 0 & 0 & 0 \\ 0 & h_0 & 0 & 0 \\ 0 & 0 & h_0 & 0 \\ 0 & 0 & 0 & h_0 \\ h_1 & 0 & 0 & 0 \\ 0 & h_1 & 0 & 0 \\ 0 & 0 & h_1 & 0 \\ 0 & 0 & 0 & h_1 \end{bmatrix} \quad \Delta n = (t_1 - t_0) / T_{\text{tap}}$$

c) CHANNEL MATRIX (Nca=1)

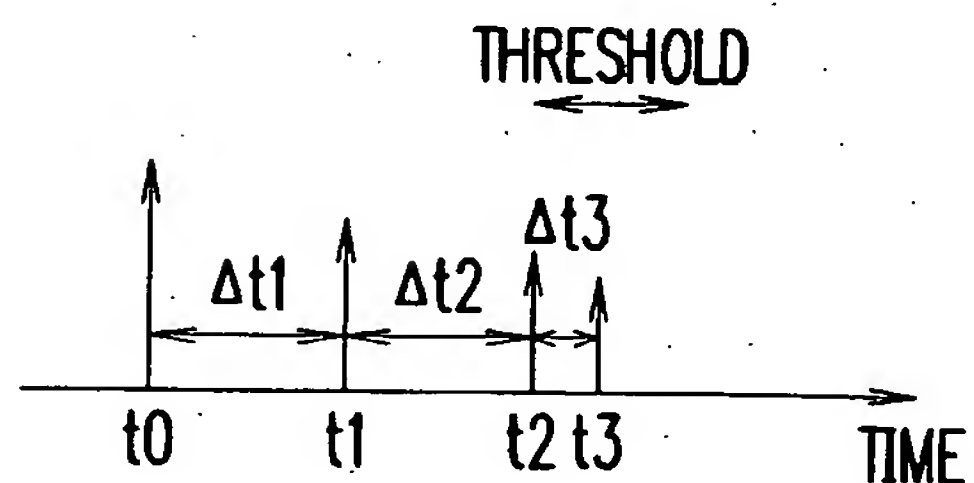
$$H_{Nca=3} = \begin{bmatrix} h_0 & h_{0-} & 0 & 0 \\ h_{0+} & h_0 & h_{0-} & 0 \\ 0 & h_{0+} & h_0 & h_{0-} \\ h_{1-} & 0 & h_{0+} & h_0 \\ h_1 & h_{1-} & 0 & h_{0+} \\ h_{1+} & h_1 & h_{1-} & 0 \\ 0 & h_{1+} & h_1 & h_{1-} \\ 0 & 0 & h_{1+} & h_1 \end{bmatrix} \quad \Delta n$$

d) CHANNEL MATRIX (Nca=3)

$$H_{Nca=5} = \begin{bmatrix} h_0 & h_{0-} & h_{0-2} & 0 \\ h_{0+} & h_0 & h_{0-} & h_{0-2} \\ h_{0+2} & h_{0+} & h_0 & h_{0-} \\ h_{1-} & h_{0+2} & h_{0+} & h_0 \\ h_1 & h_{1-} & h_{0+2} & h_{0+} \\ h_{1+} & h_1 & h_{1-} & h_{0+2} \\ h_{1+2} & h_{1+} & h_1 & h_{1-} \\ 0 & h_{1+2} & h_{1+} & h_1 \end{bmatrix} \quad \Delta n$$

e) CHANNEL MATRIX (Nca=5)

$$W = (\hat{H}^H \hat{H} + \sigma^2 I)^{-1} \hat{H}^H$$



f)